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| 09/541,614 | 04/03/2000 | Ristuo Kashiyama | 35.G2565 | 4869 |

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| EXAMINER | |
|---|---|
| YODER III, CHRISS S | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2612 | |

DATE MAILED: 08/25/2004 8

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/541,614 | KASHIYAMA, RISTUO | |
| | Examiner | Art Unit | |
| | Chriss S. Yoder, III | 2612 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 06/03/2004 have been fully considered but they are not persuasive. The Applicant's arguments are being addressed in the context of the following rejected claims.

### *Claim Rejections - 35 USC § 102*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-5, 7, 11, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al. (US Patent # 5,758,210).

2. In regard to claim 1, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block formed of a plurality of cells (figure 7: 17 is considered the sensor block outputting a signal Vout), a characteristic determination circuit that reads a first set of cells in the sensor block (figure 16: 52, 53, and 54 read the signals from the image sensor blocks) and determines the characteristics of the image signal (figure 51: #3015, this step determines the characteristics, contrast, of the image signals), and depending on the result, a reading processing circuit (figure 16: 52 selects which cells to read and controls the reading of the signals from the sensor) that applies a signal reading process at least to other cells in the sensor block not included in the first set if the characteristic signal is a predetermined result, and disabling the signal reading of the other cell units if the characteristic signal is another predetermined result

(figure 51: #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020), and wherein the sensor block corresponds to a single focus detection area (17).

3. In regard to claim 2, note Hamada discloses control circuit (figure 16: 52) that operates the charge accumulation in the image sensor previous to the characteristic determination process (figure 51: #3005 and #3015).

4. In regard to claim 3, note Hamada discloses that the first set of the plurality of cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

5. In regard to claim 4, note Hamada discloses that the first set of the plurality of cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

6. In regard to claim 5, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from the plurality of sensor blocks (figure 7: 16a-16g are considered sensor blocks outputting a signal Vout), a reading circuit (figure 16: 52, 53, and 54 read the signal from the image sensor) that reads the image signal after accumulation has finished (figure 51: #3000-3015 accumulation happens before reading the signal), a reading control circuit that reads the characteristic signal (figure 16: 52, 53, and 54 read the signal from the image sensor) and also read the image signal (figure 16: 55 and 56 output the image signal from the sensor; and figure 51: #3040 is considered to read out the image, it is selectively read out

only when the image is found to be in focus), wherein the sensor block corresponds to a single focus or distance detection area (16a-16g), a characteristic determination circuit (figure 16: 52, 53, and 54 read the signal from the image sensor) that determines the characteristics of the image signal (figure 51: #3015 the contrast is the characteristic signal) to determine if the second read process is executed (figure 51: #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020), and a circuit for detecting focus or distance information (figure 16: the sensor 17 outputs the characteristic and image signals to detect focus or distance information; and figure 51: #3075 calculates focus information).

7. In regard to claim 7, note Hamada discloses a focusing-information detecting apparatus for focus calculation according to an image signal sent from a plurality of sensor blocks (figure 7: 16a-16g are considered sensor blocks), a first output circuit for outputting the characteristic signal (figure 16: 53 outputs the characteristic signals), a second output circuit for outputting the image signal (figure 16: IS1-IS7 output the image signal), a first and second signal reading circuit for reading the output circuits (figure 16: 52 reads the characteristic signal and 54 reads the image signal), a reading control circuit for comparing the level of the characteristic signal read by said first signal reading circuit for a detection area with a determination level (figure 16: 52; and figure 51: #3015; though it does not explicitly show a determination level, for a comparison, it is inherent for there to be determination level to compare the output signal with), and reading

the image signal if the comparison results in one relationship, and disabling the read if the comparison results in a second relationship (figure 51: : #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020), and a circuit for calculating focus or distance information (figure 16: the sensor (17) outputs the characteristic and image signals to detect focus or distance information, and focus detector (33) calculates the information which can be seen in figure 51: #3075 calculates focus information).

8. In regard to claim 11, note Hamada discloses that the characteristic signal is the difference between the maximum and minimum values in the image signal (figure 51: #3015; the contrast).

9. In regard to claim 17, note Hamada discloses a focusing-information detecting apparatus executing accumulation of an image signal, a focusing calculation according to the image signal sent from a plurality of sensor blocks (figure 7: 16a-16g are considered sensor blocks), a characteristic determination circuit reading a signal from a first set of cells (figure 16: 53 reads the characteristic signal) that determines the characteristics of the image signal (figure 51: #3015 the characteristic signal is the contrast), and depending on the result, a reading processing circuit (figure 16: 52 controls which sensor blocks to read and obtain a signal from) applies a signal reading process at least to other cells not included in the first set if the characteristic signal is a predetermined result, and disabling the signal reading of the other cell units if the characteristic signal is another predetermined result (figure 51: #3020 and #3045, if the

characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020), and a focus calculation after accumulating the image signal (figure 51: #3005, #3075; 3005 accumulates the signal in the sensor blocks, and 3075 calculates the focus information), and wherein the sensor block corresponds to a single focus detection area (17).

10. In regard to claim 19, note Hamada discloses that the cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 6, 10, 12, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) in view of Ide (US Patent # 5,905,919).

12. In regard to claim 6, note Hamada discloses a focusing-information detecting apparatus as claimed in claim 5. Therefore, it can be seen that the Hamada device fails to disable the second read process if the characteristic signal indicates that the image is inappropriate for focus or distance information detection. Ide discloses the process of disabling the second read if the characteristic signal indicates that the image is inappropriate for focus or distance detection (figure 9: S2-S8; in this process, if the focus is undetectable, the process will not exit until the signal is focusable, preventing the second read). Ide teaches that this process is necessary in order to continue with the focus detection until the image focus is possible, so the image can be captured clearly

(column 10, lines 33-47). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read as suggested by Ide in order to capture focused images.

13. In regard to claim 10, note Hamada discloses a focusing-information detecting apparatus as claimed in claim 7. Therefore, it can be seen that the Hamada device fails to read the image once the focus or distance detection has succeeded. Ide discloses that once the focus detection has succeeded the process moves on to read the image signal (figure 9: S2-S6; and column 10, lines 29-32). Ide teaches that this process is necessary in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly (column 10, lines 33-47). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read as suggested by Ide in order to capture focused images.

14. In regard to claim 12, note Hamada discloses a focus or distance detection apparatus with a plurality of image accumulation sensor blocks (figure 7: 16a-16g are considered sensor blocks), a focus detecting sensor (figure 7: 17 is considered the sensor), a difference output section for outputting the difference between the maximum and minimum of the image signal (figure 16: 53 outputs the brightness of the sensor; and figure 51; #3005-3015; although it does not explicitly show that the circuit outputs the difference, but in order for the circuit to compare the contrast it would inherently calculate and output the contrast level), an image signal output section in each detection area (figure 16: IS1-IS7 output the image signal), a signal reading section that reads the difference output (figure

16: 52 and 53 read and output the difference signal), a reading control circuit (figure 16: 52 controls which sensor blocks to read), and calculation circuit for calculating focus or distance detection information (figure 7: 33 calculates the focus detection information). Therefore, it can be seen that the Hamada device fails to enable the read if the difference output for a detection area is greater than a predetermined level and to disable the read if the difference output for a detection area is smaller than a predetermined level. Ide discloses that the read is enabled if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level (column 1, lines 45-55; figure 9: S1-S8; the focus detection process uses contrast values, and based on the level of the contrast it determines if the image is in focus or not, if the contrast level is greater than a predetermined level it is considered in focus, and if the contrast is smaller than a predetermined level it is considered not in focus, in this case the focus detection process never lets the camera continue with the read process, thereby disabling the read). Ide teaches that this process is necessary in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly (column 10, lines 33-47). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read as suggested by Ide so as to capture focused images.

15. In regard to claim 15, note Ide discloses a determination circuit that determines whether the focus detection has succeeded in a focus or distance detection area (the characteristic signal is greater than the determination level),

and if it has succeeded, the process moves on to read the image signal (figure 9: S2-S6; and column 10, lines 29-32).

16. In regard to claim 16, note Hamada discloses a focus or distance detection apparatus with a plurality of detection areas (figure 7: 16a-16g are considered sensor blocks), a focus detecting sensor (figure 7: 17 is considered the sensor), a maximum output section and minimum output section for outputting maximum and minimum of the image signal (figure 16: 53; and figure 51; #3005-3015; although it does not explicitly show that the circuit outputs the maximum and minimum values, in order for the circuit to compare the contrast it would inherently need to output them in order to calculate the contrast level), an image signal output section that outputs the image signal in each detection area (figure 16: IS1-IS7 output the image signal for each detection area), a signal reading section for reading a signal from the maximum, minimum, and image signal output section (figure 16: 53, 54, IS1-IS7), a reading control circuit for reading the maximum value and the minimum value and calculating the difference between the two (figure 16: 53 outputs the brightness; and figure 51; #3005-3015; although it does not explicitly show that the circuit calculates the difference, in order for the circuit to compare the contrast it would inherently calculate and output the contrast level), and a calculation circuit for calculating focus or distance detection information (figure 7: 33 calculates the focus detection information). Therefore, it can be seen that the Hamada device fails to enable the read if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level. Ide

discloses that the read is enabled if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level (column 1, lines 45-55; figure 9: S1-S8; the focus detection process uses contrast values, and based on the level of the contrast it determines if the image is in focus or not, if the contrast level is greater than a predetermined level it is considered in focus, and if the contrast is smaller than a predetermined level it is considered not in focus, in this case the focus detection process never lets the camera continue with the read process, thereby disabling the read). Ide teaches that this process is necessary in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly (column 10, lines 33-47). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read as suggested by Ide so as to capture focused images.

17. Claims 8-9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) in view of Toshinobu et al. (US Patent # 5,361,095).

18. In regard to claim 8, note Hamada discloses a focusing-information detecting apparatus as claimed in claim 7, as well as the detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a determination level changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level according to the level of a characteristic signal. Toshinobu discloses the use of a level changing circuit that stores one value in

memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to provide a more accurate comparison value to increase focus quality (column 2, lines 49-56). Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a level changing circuit as suggested by Toshinobu.

19. In regard to claim 9, note the primary reference of Hamada in view of Ide discloses a focus or distance detection apparatus as claimed in claim 7, as well as the detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level dependent of whether it is in focus or not. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value using two different values (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to provide a more accurate comparison value to increase focus quality (column 2, lines 49-56). Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit to change the value depending on whether the focusing has succeeded as suggested by Toshinobu.

20. In regard to claim 18, note Hamada discloses a focusing-information detecting apparatus as claimed in claim 17. Therefore, it can be seen that the Hamada device lacks a changing circuit for changing the determination threshold of the determination circuit when the signal reading processing is applied to other cell units in the sensor block in response to the determination result obtained by the characteristic determination circuit. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to provide a more accurate comparison value to increase focus quality (column 2, lines 49-56). Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit as suggested by Toshinobu.

21. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) in view of Ide (US Patent # 5,905,919) as applied to claim 12 above, and in further view of Toshinobu et al. (US Patent # 5,361,095).

22. In regard to claim 13, note the primary reference of Hamada in view of Ide discloses a focus or distance detection apparatus as claimed in claim 12, as well as the detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level according to the level of a characteristic

signal. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to provide a more accurate comparison value to increase focus quality (column 2, lines 49-56). Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit as suggested by Toshinobu.

23. In regard to claim 14, note the primary reference of Hamada in view of Ide discloses a focus or distance detection apparatus as claimed in claim 12, and the detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level dependent of whether it is in focus or not. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value using two different values (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to provide a more accurate comparison value to increase focus quality (column 2, lines 49-56). Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit to change the value depending on whether the focusing has succeeded as suggested by Toshinobu.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CSY
August 13, 2004

NGOC-YEN VU
PRIMARY EXAMINER